>>>>>>>><<<<<<<<

THE

PLOTTER

CLACKAMAS COUNTY AREA T/S
USERS GROUP
NEWS LETTER
****
VOLUME 8   **   NUMBER 4
******

APRIL   1990

****
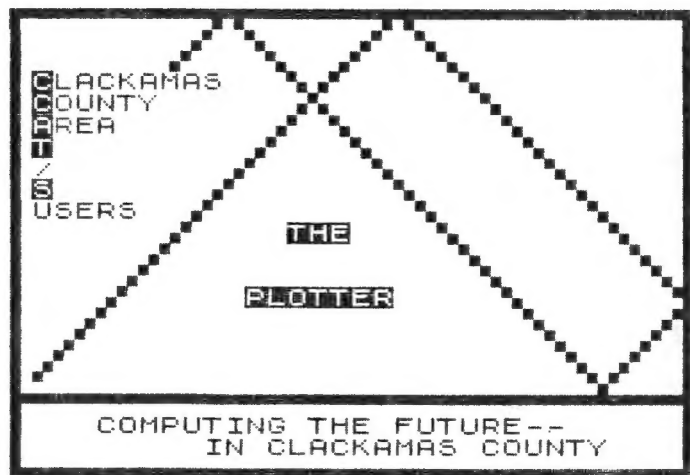
MEETING

The APRIL meeting will be:

on: SAT., APRIL 14, 1990

meeting room open at: 1:30 P.M.
in: COMMUNITY ROOM
    FAR WEST FEDERAL S & L
    OREGON CITY SHOPPING CENTER
****

WHAT YOU WILL FIND IN THIS ISSUE

COMPUTING THE FUTURE--
IN CLACKAMAS COUNTY

EDITORIAL

Hopefully, the absence of dues from a few members is an oversight on their part. This issue includes a list of names who have paid their 1990 dues. This may bring the matter to the attention of those who are delinquent. If there is a question about having paid, but are missing from this list, please check with Rod Gowen. It was a decision of The Editor to send out this issue to delinquent members, as in the past, we have stopped our mailing with the March issue. We hope to receive those dues.

We have expenses each month for publishing our newsletter. It costs us about $35.00 each month to produce and mail our publication. Based on the number of paid members plus paid subscribers at this time, we can just about break even. If we do not receive new subscribers, or renewals drop off, or our membership declines, we are in financial trouble.

>>>

CLACKAMAS
COUNTY
AREA
TIMEX
SINCLAIR
USER'S GROUP
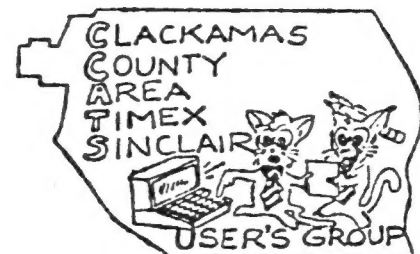
Past members who do not attend meetings may find that our $12.00 subscriber fee is of interest. Contact Rod Gowan for details.

BITS & BYTES
by: ROD GOWEN

Heard any TS related news lately? Did you get any information in the mail from other users, user groups, or vendors that may be of interest to our readers? If so, why not share it with us? We need all of the help that we can get. Please send any info that you might have to: Rod Gowen, C/O CCAT/S, 1419 1/2 7th Street, Oregon City, OR 97045, or, phone in at: 503/655-7484, NOON - 10 PM weekdays. I know that the entire user group will appreciate it!

SWAP MEET!!-

As those of you who have attended the past few meetings already know, we are planning to have a "TS Swap-meet" at our regular meeting place on SATURDAY, APRIL 14, 1990, FROM 1:30-5:00 PM. If you have any unused TS items lying around collecting dust that you think someone else may be able to use, bring it in! You may make a couple of bucks and someone will have the use of that item you no longer need. We will be looking forward to seeing you there. There will be represhments-coffee and cake (we hope) and maybe some cookies. There is also a softdrink machine on the premises. SEE YOU THERE!

DINNER MEETING-

Last year we had a "dinner meeting" and we felt that it was so success-ful that we decided to try to do it again. However, this time, we are discussing a "pot-luck" buffet to be held at a member's home. Jack Armstrong has said that he would be glad to host this meeting. Spouses would be welcome and we would be able to relax a bit. There will be final plans on this at the MAY meet. If you have any comments or would like to participate, please attend!

MS-DOS SEG?-

What's that you say?!? Yes, we are seriously discussing the formation of a Special Education Group for MS-DOS (MicroSoft Disk Operating System). We have, at this writing about 16 paid members and of those, 10-11 have or use MS-DOS machines in one form or another. There is a definite NEED to be able to understand the operating system of any computer you own. As our group was originally formed to aid new users of the TS line of computers, we are looking at the same problem again. A few of us know and use DOS, but the "newcomers" need help. If a few of us can take an hour of two per month to "share" knowledge with the ones who would like to receive it, we would still be fulfilling our original purpose, would we not? This topic will also be discussed further at the May meeting. If you have an interest or would like to volunteer your services, please be sure to be there.

That's about it! See you later!
Rod

MIKE'S NOTEBOOK
by: Michael J. DiRienzo

Did you ever do alot of repetative keying or wish you had programmable function keys? Here's a clever little utility which will do just that. I found it in an old 'SINC TIMES' newsletter. It was originally written for the Spectrum and uses the interrupt mode 2. I've modified it to run on the TS2068. As written, the code is not relocateable, but if you understand the Interrupt Mode, you can move the code anywhere above 32767. This utility will allow you to assign any alphanumeric key a user defineable function which you write in BASIC. Type in the following listing and run line 9900. If there are no DATA errors, the program will RUN. You may delete line 9900 to the end.

≫ ≫ ≫

Here are some rules to follow: The functions are set-up in REM statements at the beginning of BASIC. Study the demo examples given below. The key you wish to program should come after the REM keyword, and followed by a colon. The entire function should be on one line unless you use a GOTO line #. If you add a "#" to the end of your BASIC, it will simulate a carriage return (ENTER), and your function will execute itself. If you omit a "#" at the end, your function will appear at the input line and wait for you to press ENTER. If you want to use a normal REM statement, just place a "*" after the rem and no colon. To disable this program, type RANDOMIZE USR 64399. Note that line 3 is a CAT for Larken Disk drive.

Have fun, and write to me if you discover any unique ways to use this utility and I'll pass them along to the readers.

Happy TIMEXing...

"MACRO"

by: Michael J. Di Rienzo

```
    1 REM !: PRINT INK 2; FLASH 1
;AT 10,5;"This is a DEMO...": BE
EP .1,.1: PRINT : PRINT "Hit '0'
 For Another DEMO"#
    2 REM 0: INPUT "Input Number
(0 TO 65535) ";N: RANDOMIZE N: P
RINT "Lo Byte=";PEEK 23670,"Hi b
yte=";PEEK 23671#
    3 REM CAT : RANDOMIZE USR 100
: CAT "",
   10 PRINT "Press '!' or '0' or
' CAT ' For DEMO"
   20 STOP
9900 CLEAR 64249: LET on=64381:
LET off=64399: LET c=0
9910 FOR n=64250 TO 64405: READ
a: POKE n,a: LET c=c+a
9920 NEXT n: IF c<>19476 THEN PR
INT "DATA error!": STOP
9930 RANDOMIZE USR on: RUN
9940 DATA 255,243,229,213,197,24
5,205,9,251,241,193,209,225,251,
201,253,203,1,110,200,33,0,0,57,
235,237,123,61,92,225,1,229,11,1
67,237,66,235,249,192,42,83,92,2
4,2,235,9,35,35,78,35
```

```
9950 DATA 70,35,84,93,126,254,23
4,192,35,58,8,92,190,32,235,35,1
26,254,58,32,229,35,126,254,13,4
0,223,11,11,11,11,197,229,42,91,
92,205,187,18,19,237,83,91,92,35
,235,225
9960 DATA 193,237,176,235,43,126
,254,35,40,8,205,131,12,253,203,
1,174,201,1,1,0,205,80,23,62,13,
50,8,92,253,203,1,238,201,33,0,2
54,1,250,0,113,35,16,252,113,62,
254,237,71,237,94,201,62,62,237,
71,237,86,201
```

APRIL

We seldom take advantage of unusual things/incidences in the April issue. Thinking that some of our readers are also bird observers, the following description of the rare Crosscut Sawbill should instill an interest to shut off the computer and grab the binoculars.

CROSSCUT SAWBILL
Dendrochoppus forestii

This denizen of the deep woods is never found far from trees. The beak of the sawbill is uniquely adapted for cutting; it saws nesting material from the higher limbs and uses regurgitated sawdust as food for the young. The sawbill also saws open various nuts for food while holding them in its claws. Due to feeding accidents, most mature sawbills have very short toes. To date the sawbill has not been required to obtain Forest Service permits; however, rumors indicate that this is under consideration in Washington. Note that the circular sawbill is believed extinct.

OBSERVATION HINT Flocks of sawbills often clear-cut large areas.

1990 PAID MEMBERS

Jack Armstrong
Gaylen Bench
Robert Curnutt
Alice Dunlop
Bill Dunlop
Bob Evans
Ed Fry
Rod Gowen
Terry Graham
Duane Hewitt
D.S. Lewis
Ken Lutes
Don Malm
Tom Moll
Merlin Raymond
Dick Wagner

If any member is in contact with an unpaid member please remind that person that dues are past due.

A HOT QL FIX

Dick Wagner

My QL computer has often crashed after a couple of hours of ON time. If it didn't crash then, I could expect an eratic operation from the 80 track disk drive. It seems to be more susceptible to computer quirks than the 40 track drive. All of this is particularly disgusting if one is working on a data program like a spread sheet, or a tax calculating program.

Having resisted a new power connection from a complete power supply, I decided to try some of Tom Bent's fixes given in several Quantum Levels magazines. These fixes seemed to be logical and simple to accomplish, and corrected some of the design or production errors.

According to Tom, there is too much voltage loss between some of the critical integrated circuits due to inadequate current carrying capacity in the power traces. Also, there is a problem with the 68008 CPU implementation. According to Bob Curnutt, the data buses change state from 5 to 0 volts so fast that the 0 voltage overshoots to a negative state in the order of 1 to 3 volts.

The voltage drop was reduced to an acceptable 0.03 volts from 0.08 at the 68008 CPU chip by tapping a small amount of voltage from the 9 volt bus by adding a 22 ohm 5 watt resistor at the jumper wire just to the left of the CPU. The tap was made at pin 32 of the long socket at the left end of the printed circuit board and at the long jumper soldered connection near by. The size of this resistor required bending down the 3 small capacitors at this point. The resistor was positioned so it did not rest on these caps. The other resistor lead can be soldered at the near end of the long jumper wire.

The voltage for the CPU was also aided by adding a 10 mF tantalum type capacitor to pin 13 (+ power) and grounding to the jumper installed across the CPU. This cap is now in parallel with a 0.022 mF cap installed during manufacture. BE SURE that the cap + lead goes to pin 13. This cap will supply the high instantaneous current this chip requires.

While these 2 steps may have solved the probem I elected to do most of the other recommended changes. I didn't want to put the computer back into operation and then find it still was short. The ZX8301 integrated circuit (IC22) next to the CPU received a 0.01 mF cap between pins 6 and 15 to add bypass close to the power pin.

A sad design situation existed in the ground trace as undesireable ground loops were present. A 0.001 mF cap was connected to pin 6 of IC 22 and to the grounding jumper across IC 18 (CPU). This permitted current to flow thru the cap when too great a ground variance occured. This cap will hold the variance to less than 1 volt peak to peak. According to Tom, this value of bypass cap will change the value of the time constant for this loop from 10 nanoseconds to 40 nanoseconds.

≫ ≫ ≫

The final addition was a 0.001 cap to correct a ground loop to IC 22. Watch this--the connection again to pin 6, and across to a feed thru on the heavy ground trace to the left of pin 14 of IC 33. This point is half an inch to the left of the IC. Insulate the long lead of the cap before soldering.

An improvement in the power distribution was made by adding an insulated 20-22 gage wire from the + terminal of the 5 volt regulator to pin 8 of IC 6. This was soldered to the left terminal of the regulator. The center terminal is ground and the right terminal (from the front of the computer) is input from the power supply.

Several other additions were suggested but I figured what I had done should just about do it. SO--now there is just a feel of heat over the regulator. There does not seem to be a problem with the 22 ohm resistor even tho it gets real hot to the touch after a time. So far, an ON period of better than 5 hours has shown no operation problem. GREAT!

The information I followed was in Quantum Levels, vol. 2, no. 4 and 5. These volums may still be available even tho the publishing of Quantum Levels has stopped. Write to 602 Mill St. Louisville, OH.

One step I took long ago was to remove the cover of the right accessory port next to the reset button. This in hopes that enough cool air would enter to help cool the regulator. Now I can close this port.

The parts can be obtained from Radio Shack. Use a 20 ohm 10 watt resistor which will probably fit as well as the 5 watt size. Other parts required:

1-10 mF tantalum capacitor
2-.001 ceramic capacitors
1-.01 ceramic capacitor

PRINTER GRAPHICS CORRECTION

Dick F. Wagner

Some years ago I discussed in THE PLOTTER and TIME DESIGNS magazine how to apply a multiplying factor of 1.24 when using the 2040 printer. This was to print square squares, true circles, etc, that looked the part, in place of ovals for circles and rectangles for squares. After all, if a writer wants circles to be displayed, they should be circles.

The same approach is applicable where a screen dump on a large matrix printer should look the part. The difference between the screen dumps on a 2040 printer and a large dot matrix printer is that the 2040 makes an elongated figure (a square is higher than wide) while the large printer makes a figure wider than high. The correction factor of 1.24 is applied to all calculations pertaining to the width when using the 2040 printer. For screen dumps to a large printer a factor of 60/72, or 6/7 (.83) is applied to the calculations for the X axis.

The logic is that printers will print a square if 72 dots or pins per inch are used in place of the standard (I think it is standard) 60 pins or dots per inch for TS computer screen dumps.

So far I haven't seen a screen dump other than Ken Lempke's in UP DATE magazine that permits the input for the printer codes. This program will permit any codes that your printer uses for the number (density) of dots per inch. Ken Hartung has written on this subject in the now out of print SyncWare News. He even has a program that permits dumps to daisy wheel printers by using the period character.

One way around this is to use PIX-FX by Mike Di Rienzo (see the March issue of THE PLOTTER). This doesn't change the number of dots per inch in printing. It adds or subtracts dots per line, depending upon how much the magnification or decrease
≫ ≫ ≫

is selected. If the correction factor of .83 is used, the actual screen image width is reduced by deleting 17 per cent of the dots across the screen image.

The PIX-FX program is distributed by RMG Enterprises. It includes a nice manual that covers the various elements of using the program. It does not generate a screen image but is used to adjust the image, position it on the printed page or screen, and even merge two screen image.

For comparison purposes I have printed a one inch circle made up of 72 pixels per inch for diameter. This prints one inch high on the Y axis and 1.2 inch on the X axis. The Lempke program prints a one inch diameter circle in all axis. The PIX-FX program prints a one inch diameter circle also. If the original screen image is made up of fewer pixels in the circumferance, then irregularities show up with PIX-FX. It may require a magnifying glass to pick out the difference.

Does any one know of some pokes that will revise the computer screen dump for 72 dots per inch?
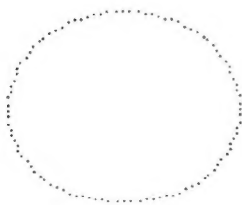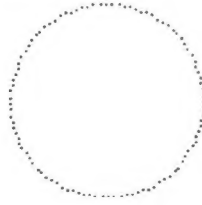
2040 PRINTER
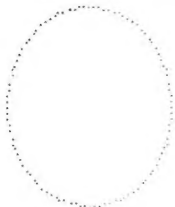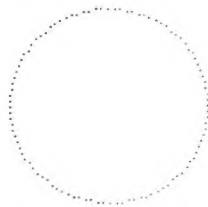
NORMAL   CORRECTED

PANASONIC PRINTER

NORMAL   CORRECTED
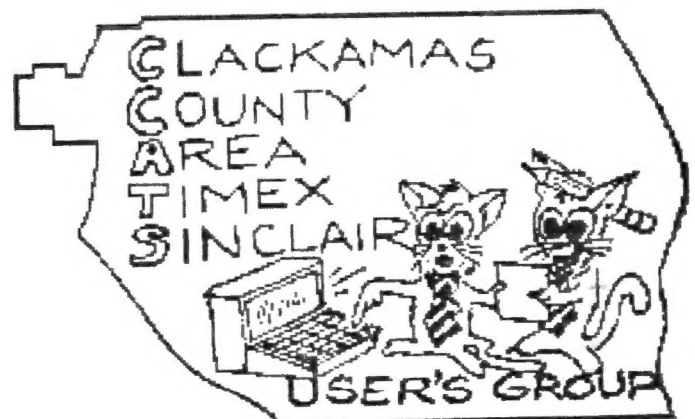   72/72

CCAT/S LOGO

Dick F. Wagner

This month we are devoting a lot of space to printer graphics. At least for me, this is an interesting subject and it makes use of the printer for more than just writing text. After all, there are graphic functions incorporated into the printer so why not learn to use them.
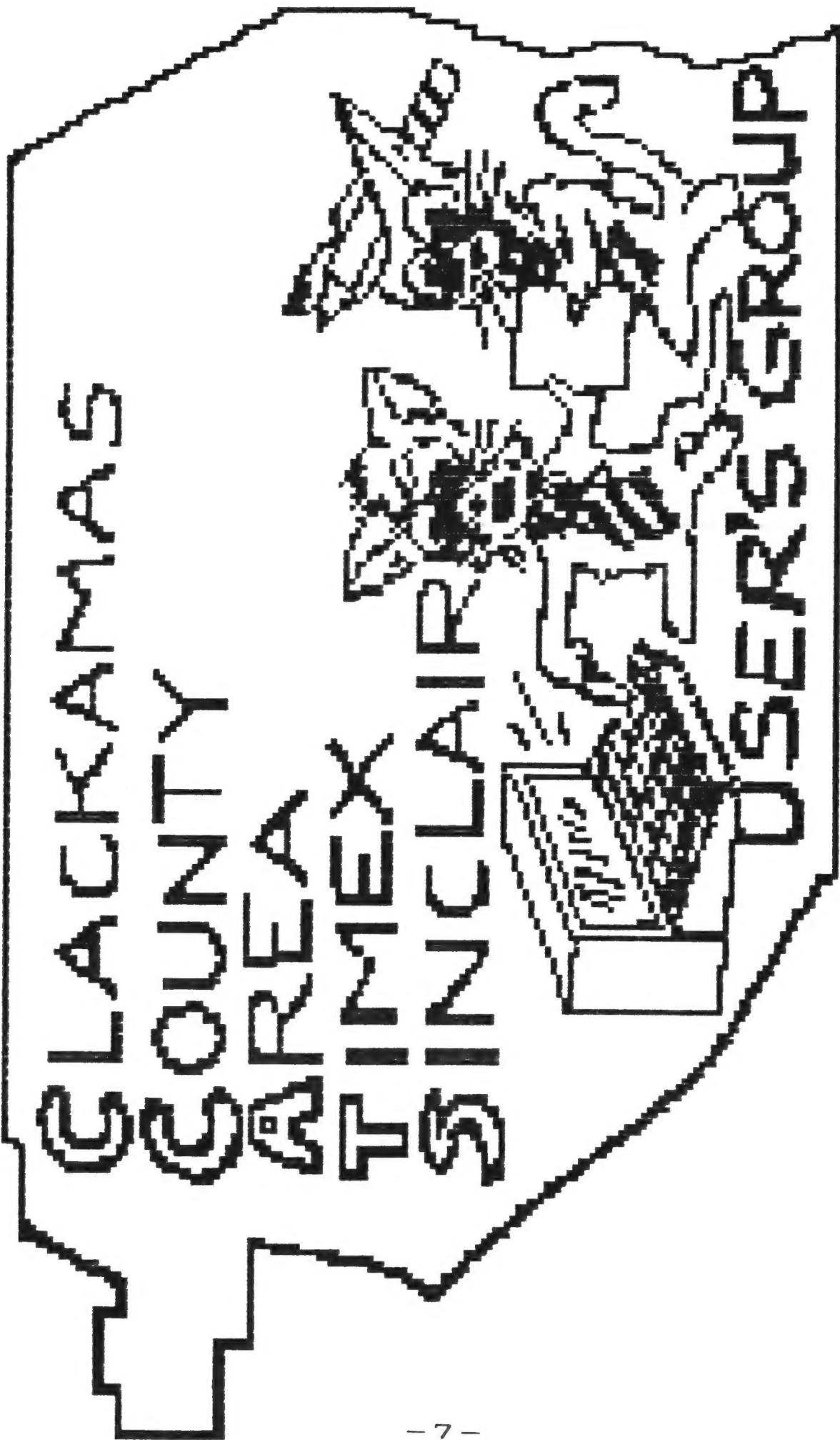
The first page logo of the 2 cats at a computer has been digitized by Mike De Renzio. He worked from a copy of the original sketch. He then sent to Rod the SCREEN$ copy so screen dumps could be made.

If the COPY command is used and sent to a large printer, the image will be distorted, wider than it should be. If the COPY goes to a 2040 printer, it will be longer than it should be. The solution is to send the SCREEN$ image to the large printer with Stan Lempke's printer program. This program produces a 1 to 1 ratio for width and length. However, to get this ratio on many printers it requires the tractor feed and not the friction feed.

Another advantage of the Lempke printer program is that you can set up printer commands and print where you want across the page. An image cam also be reduced in predetermined steps based on the printer codes.

CLACKAMAS
COUNTY
AREA
TIMEX
SINCLAIR
USER'S GROUP

≫ ≫ ≫

CLACKAMAS COUNTY AREA TIMEX SINCLAIR USER'S GROUP

☲ ☲

NOTICE !

Please note that the April meeting is on Saturday, the 14th, from 1:30 to 5:00 PM at our usual meeting place. This is a swap meet to help members to get rid of those unused programs, hardware, etc. Of course, members are at liberty to take home more than they brought.

—NOTICE—

Opinions expressed in articles are not necessarily those of members of the Clackamas County T/S User Group. Meeting minutes carry the consensus of members present at meeting. This newsletter nor staff will not be held liable for any damage or consequences due to following instructions, or review of products as contained in this newsletter.

POKES

Jack Armstron reports that users of SIGN DESIGNER, the greeting card designer program, can access the printer line feed code at address 49124. POKE a "0" for no LF and a "10" for LF.

SUBSCRIPTION RATES

FREE SUBSCRIPTION WITH PAID CCAT/S MEMBERSHIP-$20.00/YR

PLACE YOUR AD HERE

AD RATES
****
1 FOUR LINE CLASSIFIED FREE WITH MEMBERSHIP

$ .50 / LINE
$ 5.00 / 1/4 PAGE
$ 8.00 / 1/2 PAGE
$ 15.00 / FULL PAGE

ALL AD COPY MUST BE IN BY THE 10TH OF THE MONTH PRIOR TO THE MONTH AD IS TO RUN.

CCAT/S
1419 1/2 7TH Street
Oregon City, OR 97045